Annual cycles of reproductive steroids in the Blotched Blue-tongued Lizard, *Tiliqua nigrolutea* (Scincidae).

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T. nigrolutea is a large skink distributed across south-eastern mainland Australia and Tasmania. This species is torpid throughout winter with males emerging (Sept-Oct), roughly one month before females (Nov) in spring. Mating occurs in November, with gestation for approximately three months over summer. Parturition occurs in early autumn.

I have investigated the annual cycles of the sex steroids, progesterone (P4) and testosterone (T), in *T. nigrolutea.* Captive animals were maintained under natural lighting conditions with supplementary heat for basking. In females, plasma P4 levels increase through early pregnancy. Concentrations peak (6.3 ± 2.2 ng/ml) during the second trimester (Feb) and drop to basal levels (< 1 ng/ml) before parturition. This closely resembles the pattern previously reported for the sleepy lizard, *T. rugosa*, and is comparable with hormone profiles during pregnancy in some other viviparous reptiles. Plasma T in males peaks (10.2 ± 3.5 ng/ml) in October, coincident with peak testis size, the presence of mature sperm in the testis and aggressive male-male interactions. This peak in plasma T concentration is, however, temporally dissociated from mating behaviour and plasma T concentrations are lower than those reported for other reptiles.